

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/022433 A2

(51) International Patent Classification⁷: **G06F 17/60**

NISHIDA, Hiroyoshi. YOSHIDA, Ikuo. KONISHI, Chikashi. MATSUMOTO, Masaya.

(21) International Application Number:
PCT/JP2004/012672

(74) Agent: **NII, Hiromori**; c/o Nii Patent Firm, 3rd Floor, Shin-Osaka Suchiro Center Bldg., 11-26, Nishinakajima 3-chome, Yodogawa-ku, Osaka-shi, Osaka 532-0011 (JP).

(22) International Filing Date: 26 August 2004 (26.08.2004)

(25) Filing Language: English

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PI, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
2003-308324 1 September 2003 (01.09.2003) JP

(71) Applicant (for all designated States except US): **MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD.**
[JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP).

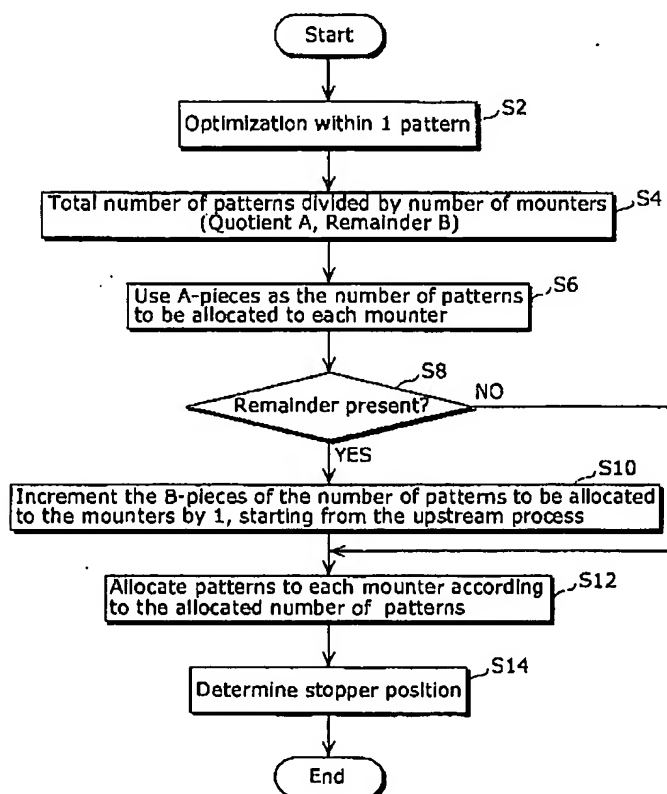
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MAENISHI, Yasuhiro. YAMAZAKI, Takuya. YAMASAKI, Akihito.**

[Continued on next page]

(54) Title: **METHOD FOR OPTIMIZATION OF AN ORDER FOR COMPONENT MOUNTING AND APPARATUS FOR OPTIMIZATION OF AN ORDER FOR COMPONENT MOUNTING**



(57) Abstract: A plurality of patterns having the same component placement structure is included in the board, said plurality of patterns corresponding respectively to a plurality of sub-boards obtained by partitioning said board. The optimization method of an order of component mounting i) includes a step of optimizing the order of component mounting for any one pattern among the plurality of patterns (S2), a step of calculating a quotient and a remainder by dividing the total number of the patterns included in the board by the number of mounters (S4), a step of determining the quotient as the number of patterns to be allocated in the case where the remainder is zero (S6), and a step of i) determining a number, which is the quotient plus one, as the number of patterns to be allocated to the same number of the mounters as the remainder, starting from the mounter in a process farthest upstream, and ii) determining the quotient as the number of patterns to be allocated to the rest of the mounters, in the case where the remainder is one or greater (S6 to S10), and a step of allocating the allocated number of patterns, to each of the mounters (S12).

WO 2005/022433 A2



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- without international search report and to be republished upon receipt of that report